

JOURNAL OF COLLEGE RADIO

BRACE FORD UNIVERSITY

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The Journalist's Creed

I BELIEVE in the profession of journalism.

I BELIEVE that the public journal is a public trust; that all connected with it are, to the full measure of their responsibility, trustees for the public; that acceptance of a lesser service than the public service is betrayal of this trust.

I BELIEVE that clear thinking and clear statement, accuracy, and fairness, are fundamental to good journalism.

I BELIEVE that a journalist should hold in his heart to be true.

I BELIEVE that suppression of consideration other than the well-defensible. I believe that no journalist what he would not be bribed by one's own pocket avoided as bribery by the public individual responsibility in giving another's instructions.

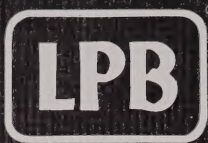
I BELIEVE that advertisement should alike serve the single standard of the public prevail for all; that journalism is the mechanism of the media.

I BELIEVE that the best deserves support is stoutly independent of power, of money.

NOVEMBER 1971

and, as far as law and honest wage human brotherhood can make it so, profoundly patriotic while sincere international good will and comradeship; is a journalism of hope today's world.

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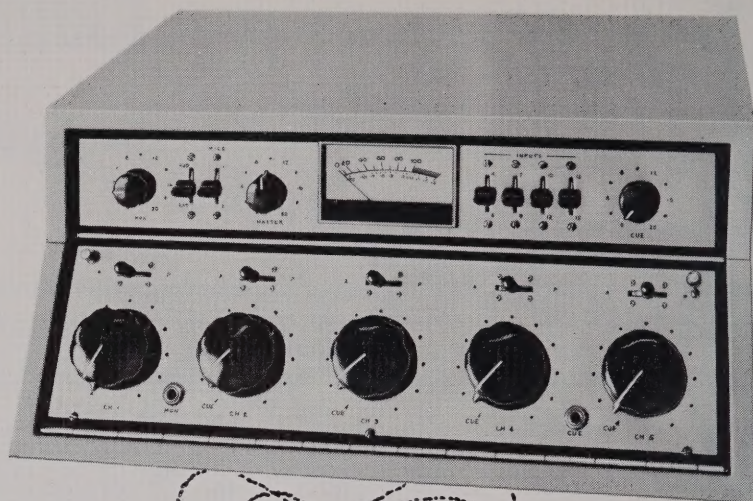
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JOURNAL OF COLLEGE RADIO

Intercollegiate Broadcasting System, Inc.

University of Southern Mississippi
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PUBLISHER'S REPORT

JACK DESKIN

Out of the blue comes a cry in the wilderness. The blue—the Office of Telecommunications Policy. The cry—“de-regulate radio.” Who did it? Dr. Clay T. Whitehead, the director of the office. Why did he do it? Nobody knows. His plan, which was unveiled at the IRTS luncheon in New York, would de-regulate radio, remove government from program regulation, and replace the fairness doctrine with a statutory right of paid access. Dr. Whitehead emphasized that he thinks the Federal Communications Commission exercises too much control over the details of a broadcaster’s operation—particularly in the area of programming. Said Whitehead, “The 50th anniversary of the Communications Act is 1984.”

Most of the responses to his speech were favorable and some said it was stimulating, but all indicated there are points which need to be cleared up.

The Whitehead proposal runs parallel to our thinking. And it may help the movement to rewrite the Communications Act; but one thing bothers us—is he sincere? We hopeso. I just cannot get the idea out of my head that he is a branch of the administration which is looking to broadcasters for support in an upcoming election. It is embarrassing to have such notions, but today, you just never know.

Due to extreme criticism, the American Research Bureau has announced plans to drop product usage from its audience reports. Critics argued that the product data affects the accuracy of the viewing data. This is difficult to understand, but nevertheless, many agencies and advertisers agreed that it is not needed and did not provide any additional information. It is a needed service. ARB’s new president, Theodore F. Shaker, said product usage might be continued, but gathered and distributed separately from audience reports if there is a market for it.

Tracy Westen and the Stern Community Law Firm have filed a new complaint with the FCC. This complaint charges ABC with discriminatory refusal to broadcast. The case in point was half-time activities at the Buffalo-Holy Cross football game which ABC refused to carry. The program was designed to express students’ views on the Vietnam war, racism, and industrial pollution. The refusal to carry the student body program constituted illegal censorship under the First Amendment, according to Westen.

A brief synopsis of the Court ruling requiring new IBS elections can be found in Sign Off. Member stations of IBS with voting powers should pay particular attention to this situation.

THE PERSUASIVE DOCUMENTARY

PART II

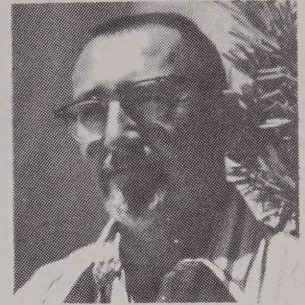
Last September, Part I of this article presented two guidelines to use in constructing the persuasive documentary: it must face real life problems through original research into the problem, and it must be properly scripted. Part II deals with two more guidelines: It must stimulate to action, and it must attract and hold attention.

Documentaries sometime fall down by making the audience see the problem as insurmountable, or beyond individual management; the end result is the listener is not led toward doing something about the problem. The script must lead individuals to accept a point of view about the facts presented. If the program is the message, then action appeals are integrated within the whole script, and are restated in the conclusion of the program. To induce action, several methods common to persuasive speaking may be used: In part, some appeal to reason within the script is

Professor Martin began his career in broadcasting in 1949. He has worked in ETV at Wisconsin and Nebraska. He supervised the University of Nebraska's radio station and put Sacramento State College's station on-the-air.

Professor Martin is the author of an article in the May issue of Educational Instructional Broadcasting and has another which will appear in a future issue of the Journal of Broadcasting.

Dr. Martin, an Associate Professor and Chairman of the Department of Radio-TV, CSC, received an M.A. in Political Science and a Ph.D. in Speech (radio).



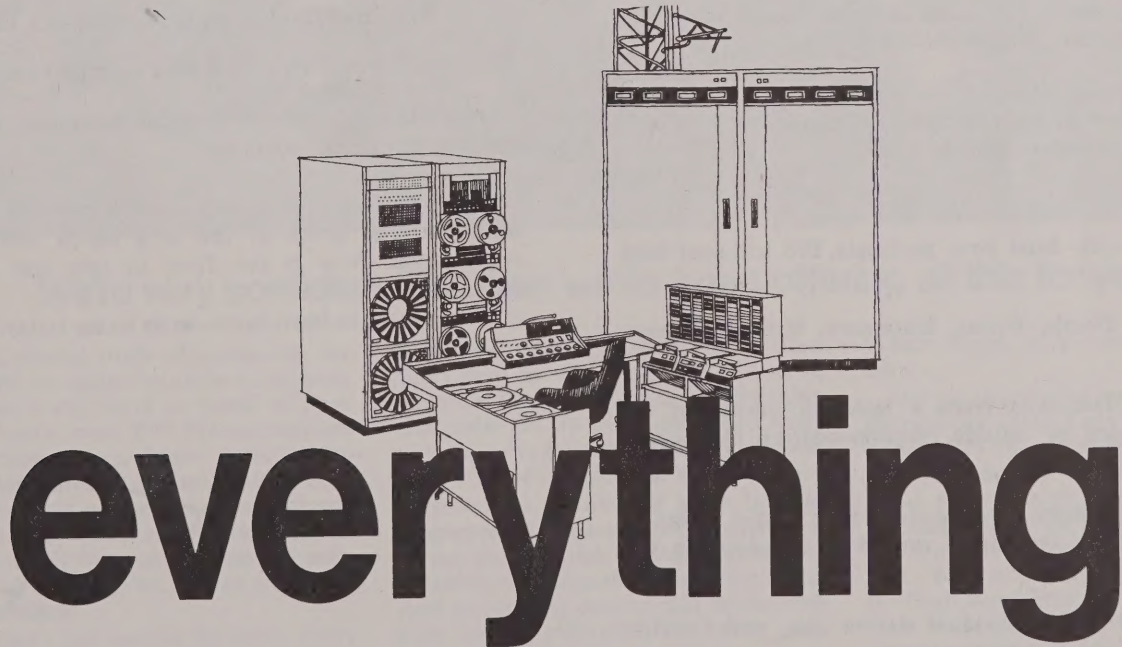
Howard S. Martin
Chairman, Department of Radio-TV
California State College Long Beach

good, providing the emotional aspects are not made secondary, and such appeals may be made in the form of rational explanations, especially when the statements are believable on their face, or when one fact weighs more heavily than another, or when the point of view is obvious. Testimonials from disinterested witnesses and experts can be marshalled into arguments that support appeals to action. Beyond such rational approaches, there must be emotion: If audience desires or motives are researched carefully in advance, the script

may use visualization of the future to induce action, by promising that the future can be better if certain actions are taken. If the inducements are juxtaposed properly against points of view not favored by the program, the inducements tend to be accepted.

In order to stimulate to action, at the end of the program the appeal to action must take a definite and straight-forward form, more or less "ordering" the audience so that they cannot mis-interpret what the

(Continued on page 25)



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Conventions—(National & Regional) to exchange ideas and plans.

IBS Master Handbook—500 pages of facts, figures, advertising ideas, and many other services for college radio.

Iota Beta Sigma—A college radio honorary for IBS member stations and their staffs. Get the recognition you and your staff deserve. 63 chapters coast to coast.

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Engineering Consultation Service—Individual aid for your stations problems.

FCC—Representation on call letters, new applications, etc.

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Program Consultation Service—Got a programming question—we have answers.

Record Company Relation Dept.—Provides you with top 40 surveys, records, and record promotion.

Tape Program Service—Hundreds of tapes available at low or no cost.

International Exchange Service—Exchange tapes with college stations everywhere.

Music License Clearance—For carrier current and educational stations.

BUSINESS

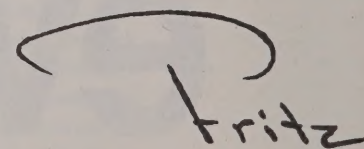
Preprinted forms—contracts, affidavits, logs, etc.

Sales Consultation Service—Have a sales problem? Write us.

Equipment Sales Service—Provides possibility of centralized low cost equipment purchases.

There are many more services IBS provides exclusively to members. The point is, IBS is a mover and on the ball organization. *Now is the Time* to join and use its many services.

If you want to learn more—write to me today.

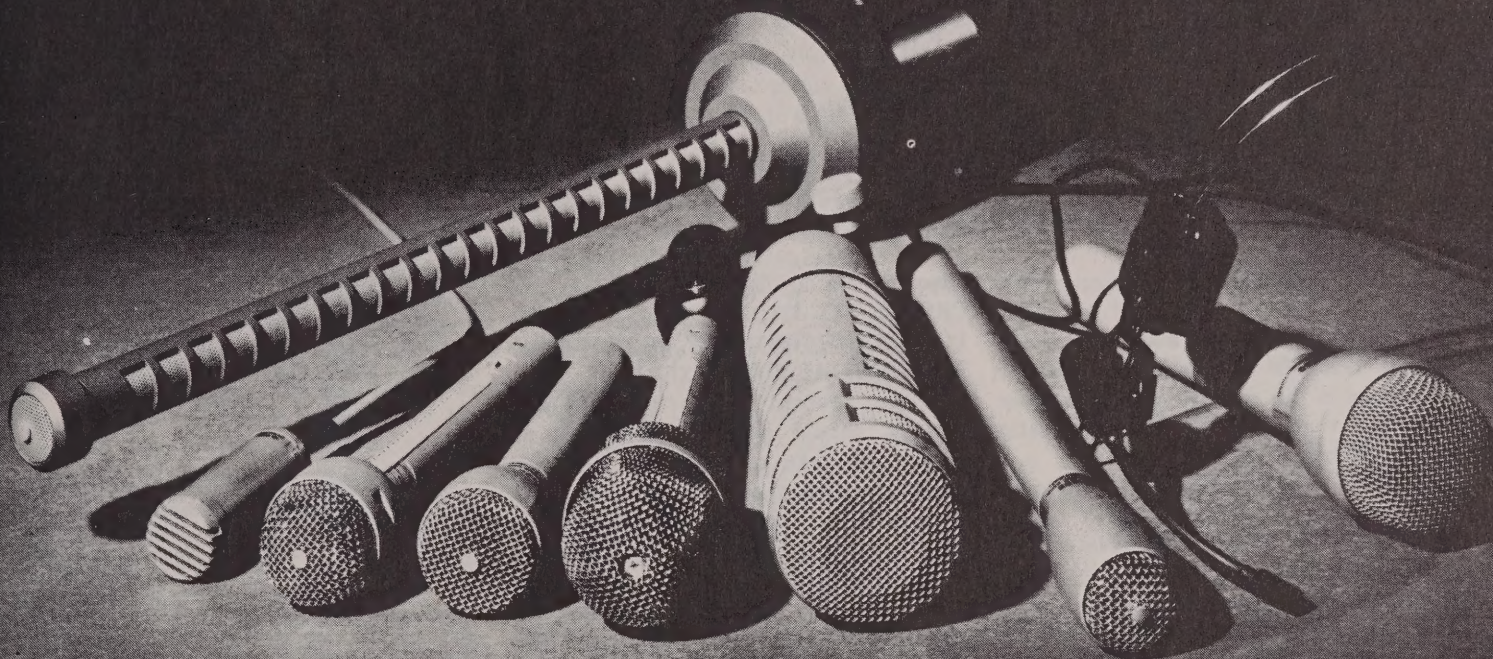


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"Changing...from a medium...for entertainment to (one)...with social impact is no easy task"

CHANGING YOUR STATION

by
Martin A. Patt
Assistant Professor
Lowell Technological Institute

(Editor's Note: Professor Patt is the author of *The WLTi Experience*, which appeared in the September issue of the *Journal*.)

Changing a college radio station from a medium primarily programmed for entertainment to a medium with social impact is no easy task. To maximize your chances for success in this endeavor, it is extremely important that a logical and systematic foundation be laid for the change.

One of the most important steps to be taken involves the development of a clear set of objectives upon which all interested parties agree. If this is done carefully at the outset, many of the decisions to be made later can be expedited by looking back at the agreed-upon objectives and checking to see whether or not a proposed action is consistent. At WLTi(FM) in Lowell, Massachusetts, a set of five such objectives was established.

Objective No. 1 TO PROVIDE A NON-COMMERICAL BROADCAST FACILITY TO SERVE SOME OF THE EDUCATIONAL NEEDS OF LOWELL TECHNOLOGICAL INSTITUTE, LOWELL STATE COLLEGE, THE CITY OF LOWELL, AND THE SURROUNDING COMMUNITIES.

The first objective was selected to provide a unique educational service for the schools in the Greater Lowell area. It is expected that some of the educational broadcasts would take place during school hours, while others would take place in the evening. A great deal of time must be allocated for coordination with the local schools. If a station is fortunate enough to employ a full-time manager, he should be asked to assume this responsibility. In the absence of a full-time employee, a local educator should be asked to participate in the coordination effort.

Objective No. 2 TO BRING HONOR AND CREDIT TO THE LOWELL TECHNOLOGICAL INSTITUTE BY PERFORMING SUBSTANTIAL PUBLIC SERVICE.

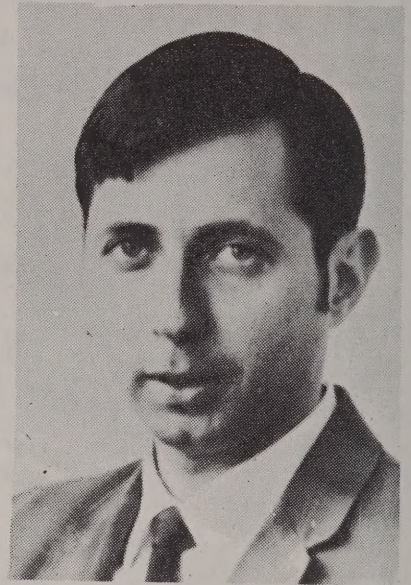
The second objective, although obvious, should not be overlooked. Although we take a great deal from our college, we seldom make a deliberate effort to contribute anything of value. What better effort could we make than to enhance the image of our alma mater?

Objective No. 3 TO ESTABLISH A GOOD NAME IN THE BROADCAST COMMUNITY BY ENDEAVORING TO TRAIN ITS STAFF TO BECOME RESPONSIBLE AND RESPECTED BROADCASTERS.

By establishing a reputation which commands respect in the broadcast community, it becomes possible to draw on the talent and experience of professionals toward the achievement of our goals. Professional broadcasters are attracted to such a station and are willing to work on projects of importance to the community.

Respect also helps the graduating senior. For the past several years, a number of our staff have set their sights on a career in radio and TV broadcasting. As respect for our station grows, these seniors will find their association with WLTi of ever-increasing value in finding the employment that they seek.

Objective No. 4 TO PROVIDE AN EDUCATIONAL LABORATORY EXPERIENCE FOR STUDENTS AT LTI INTERESTED IN A CAREER IN BROADCASTING OR IN BROADCAST ENGINEERING.



Mr. Patt is an assistant professor in the Dept. of Electrical Engineering at the Lowell Technological Institute and officially responsible for the operation of WLTi(FM). Born in Medford, Massachusetts, Prof. Patt did his undergraduate work at Northeastern University and his graduate work at the Massachusetts Institute of Technology. He has recently published a textbook on Probability Theory for engineers.

The fourth objective differs from the third in a subtle way. While the third objective is concerned with the ethics of the broadcasting profession, the fourth deals primarily with the techniques. In this laboratory, a student can learn to function as a newsman, a disc jockey, or even as a station engineer. He can gain considerable experience in production if he so desires. The value of this educational opportunity can be enormous.

Objective No. 5 TO SERVE SOME OF THE ENTERTAINMENT NEEDS OF LOWELL AND THE SURROUNDING COMMUNITIES.

This last objective is no less important than the other four. Any attempt to change a station from a pure entertainment medium to one designed for social impact is almost certainly doomed to failure if entertainment is neglected. Without a large

(Continued on page 25)

ENGINEERING

By
Ludwell Sibley
Engineering Editor

"DX" Happens with Ten Watts, Too!

Class D FM stations contend with rather limited coverage compared to that of higher-powered operations. But under favorable conditions the attainable range can produce some surprises.

A ten-watt station in the San Francisco Bay area, KZSU, has come up with a rather startling case of long-distance reception. A listener in the mountains 99 miles northeast can hear the station consistently with a good signal.

The transmitter installation is a ten-watt transmitter on 90.1 MHz with four antenna bays at a height of about 520 feet above sea level. With the resulting antenna gain and the station's particular height above average terrain, the 50 uV/m contour theoretically falls about 20 miles away.

The receiving setup is rather better than most, which partly explains the situation. It is on a ranch a mile or so distant from any main road, so the local noise level is low. The antenna is a standard log-periodic affair with about 11 dB gain and low side lobes. It feeds a good commercial preamplifier with a low noise figure of 5 dB, mounted on the 60-foot tower. With a good FM tuner, the signal has been consistently good for about six months. The tuner gets full limiting with a margin of about 3 dB.

The listener is a radar astronomer of some standing whom the writer has known for years. His report is considered highly credible!

The accompanying graph shows a profile of the terrain between transmitter and antenna. The path is plotted on a standard "4/3 earth radius" scale, which includes the combined effects of the earth's curvature and of atmospheric refraction. The path is hardly a line-of-sight one, with two ranges of hills in the way, plus earth curvature. However, the hill blockage is spotty at slightly different azimuths - portions of the Livermore Valley can be seen from the receiver site - and there may be a stable atmospheric inversion layer to provide some beam bending.

The various hills, plus the directivity of the antenna, tend to suppress co- and adjacent-channel interference which would ordinarily block a weak signal.

This case provides an interesting example of what even low-powered FM can do under highly favorable conditions.

Integrated-Circuit Audio Stages. Linear integrated circuits are now so well developed that the only really modern way to build audio equipment is to use them extensively. The earliest ICs (the 709, for example) were too noisy for use except in medium- and high-level stages where noise was not critical. In the six years since their introduction a variety of high-gain circuits have become available which appear well suited for use as broadcast-grade preamplifiers and general medium-level packages of gain. The 709 and other like it are still suited for such applications as line drivers. At least one college-station has a custom-built IC console in operation.

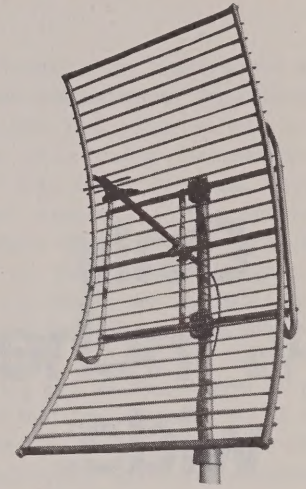
Table 1 shows a number of promising preamplifier types. Several of them are dual units which are naturals for stereo use, but which may be handy in mono equipment to save space or cost.

(Continued on page 8)

TABLE I
Preamplifiers

Type	Case	Functions	Open-Loop Gain	Max. Volts	Price
GE PA 239	14-pin DIP	Dual	2,500	+16	
Motorola HEP 592	10-pin TO-5	Dual		+ 8	\$3.95
Motorola MC1303P	14-pin DIP	Dual	8,000	+15	2.64
Motorola MFC8040	8-lead flat	Single	1,000	+33	2.13
Fairchild uA739C	14-pin DIP	Dual	10,000	+18	
Fairchild uA741	8-pin TO-99	Single	100,000	+22	
Fairchild uA749D	8-pin TO-99	Dual	40,000	+12	
Signetics S5741T	8-pin TO-99	Single	100,000	+22	

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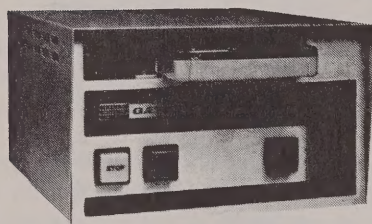
- Any frequency in the 350-1,000 mhz range.
- Performance equals that of a more expensive parabolic dish of the same aperture.
- Special exclusive design achieves great structural strength with little weight (25 lbs.) by distributing stresses over a wide area.
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For complete information on the Compact Criterion playback unit, write Gates, 123 Hampshire Street, Quincy, Illinois 62301.



Engineering (Continued from page 7)

Some caution is necessary in reading information on the maker's data sheet. The "open-loop" gain figure reflects the gain that is available if the external circuit provides no negative feedback. But almost all IC applications use some feedback. The available gain also depends on supply voltages, source and load impedances, and variations among individual ICs. "Channel separation" data for dual units refer to the unwanted coupling between the two halves. This coupling is usually so small that crosstalk in the circuit wiring will be the controlling factor. "Noise figure" ratings are to be treated with caution because they represent the best performance obtainable from the IC. The actual noise figure in the circuit depends on the source impedance of the circuit which

uA741 IC); "Applications of the uA739 and uA749 Dual Preamplifier Integrated Circuits in Home Entertainment Equipment," APP-171 (Fairchild; gives designs for tape and turntable use). Copies of this material and data sheets are available through IBS Engineering.

There are now a good variety of power ICs too. These are usable for driving speakers up to 20 watts and for transmitter modulators. Their performance is good except that distortion tends to be a percent or more. A good deal of the distortion is the "crossover" type which does not respond well to treatment with feedback. This level of distortion is quite acceptable for carrier-current modulators. For FM consoles it is advisable to use a low-distortion medium-power IC to feed the program line. The distortion of the power amplifier used for the monitor amplifier is then out of the air chain. Table 2 shows some typical power ICs.

TABLE II
Power Amplifiers

Type	Case	Max. Volts	Output	THD	Price
RCA CA3020A	12-pin TO-5	+ 9	1 W	3.0%	\$3.92
Motorola MFC 4000	4-pin flat	+12	¼ W	10	1.35
Motorola MFC 9000	8-pin flat	+22	1 W	1	4.57
Motorola HEP 593	10-pin TO-5	18	1 W	0.5%	4.50

feeds the IC; for each IC type there is an optimum impedance which will give the least noise figure and which may not match the tape head or phono pickup. "Input and output resistance" figures depend heavily on the amount of feedback used and the method of feeding back. "Harmonic distortion" varies with supply voltage, feedback, load, and operating levels. It can be kept below 0.3% in preamplifiers. Some ICs are intended for use with a single power supply, others with both positive and negative supplies.

The manufacturers' application notes give good circuit information for designing with ICs. Some good ones are "An integrated Circuit Stereo Preamplifier," AN-420 (Motorola Semiconductor Products, Inc., Box 955, Phoenix AZ 85001; shows use of the MC1303P and a discrete transistor together in a tape-phono preamp with tone controls and power supply; 1968); "A Low-Noise Tape Preamplifier," APP-180 (Fairchild Semiconductor, 313 Fairchild Drive, Mountain View CA; shows a low-noise discrete preamp followed by a

Some Words About Safety. The concept of "safety" is a great American institution which receives roughly as much lip service as "free enterprise." The normal citizen is constantly pelted with admonitions to drive safely, prevent fires, stop home accidents, and so on, until he can block them out of his mind without regret. But there are real hazards in college radio engineering, and perhaps we should give safety a little serious regard.

The most obvious problem is electrical safety. Electric shock kills several hundred victims in North America each year. Being universally available, plain old 120-volt AC gets the vast majority. These deaths are largely preventable by use of three-wire cords and plugs, but even now grounded outlets are something of an exception. Often some clever person has clipped the ground pin off a three-wire plug. Or the outlet may be wired wrong - during a survey of the outlets in a major computer center addition, it turned up that several had the hot and neutral leads reversed, and

(Continued on page 21)

An Inquiry Into The Role And Policy Of A College FM Station

As
Defined by an Ad Hoc
Committee* at the
University of Denver

by
Melvyn M. Muchnik

Director of Communications
Governors State University
Park Forest South, Illinois

Melvyn M. Muchnik is Director of Communications at the newly-created Governors State University in Park Forest South, Illinois. Mr. Muchnik holds a B.S. in Psychology, and M.A. in Radio and Television; and is currently completing his Ph.D. in Communications at the University of Denver. Prior to joining Governors State University, he served for six years on the faculty of the Department of Mass Communications at the University of Denver. He has worked for a number of commercial and public radio and television stations and as a faculty member has specialized in Mass Communication Law, Radio and Television Production, and Educational Technology. At the University of Denver, he directed a number of Federally funded institutes in educational media. This article is based on a reprint of a University of Denver Chancellor's Ad Hoc Committee on college radio which Mr. Muchnik chairs.

*The Ad Hoc Committee on the University of Denver FM station (KCFR) was chaired by the author and comprised of students Ray Hale and Eloy Soza, administration representatives James Kauffman (Dean of Student Life), William Edward Mansfield (Assistant to the Chancellor), and two other faculty members, Russell Porter and Ben Bozeman.

The State Is Not Necessarily The Unfettered Master Of All It Creates

A number of court decisions have indicated that campus media, once created for the express function of serving as a forum of student expression may not then be subject of the scrutiny and restraints of the university or college administration. As the courts have said, "The state is not necessarily the unfettered master of all it creates." For example, in a 1970 case involving the student newspaper of Southern Colorado State College in Pueblo, Colorado, the University found out via a Federal court that it could not fire the editor of the newspaper for not submitting copy to that University's Department of Mass Communications prior to publication. In that case, the U.S. District Court in Denver ruled that the restraints placed on the editor's writing, "Did abridge her right of free expression, and her suspension was an impermissible punishment for the exercise of that right."

Because of decisions such as these, the trend among many college newspapers is to create a legal separation between the student newspaper and the university administration. In this way, students are insured the unhampered right of free expression while the university administration gains assurances that it will be free of legal repercussions such as libel suits, false or deceptive advertising, and copyright infringements.

The situation becomes more complex when dealing with a college radio facility. In the first place, the Federal Communications Commission is reluctant to grant a license to a transient student organization and often seeks assurances that there will be faculty supervision and a professional staff. On the other hand, college and university administrations are becoming increasingly reluctant to obtain the license and assume legal responsibilities that are non-delegate to operate a facility that may be perceived to function primarily as a student enterprise.

In 1970, the Board of Trustees of the University of Denver received a license to operate KCFR, a ten-watt FM station. An Ad Hoc Committee on the University of Denver FM station was created for the express purpose of dealing with the rather

delicate relationships noted above and to make recommendations concerning the station's role and policy as well as other matters concerning management and budget.* The Committee was impressed with the complexity of problems and relationships that exist in an FM station licensed to the board of trustees of a private university, serving not only the University of Denver community but the larger Denver community as well and functioning as a student activity. It should be noted that the primary funding agency for the station was the University Student Senate although the Administration did provide funds for initial capital outlay.

The Ad Hoc Committee was primarily concerned with the creation of station policy and a mechanism that would insure that the legal responsibilities and obligations accepted by the licensee were properly discharged in the actual operation of the station within a framework that would include competent management while maintaining the student-centered focus of the activity. Among its recommendations, the Committee proposed the immediate hiring of a full time general manager and the creation of a policy board consisting of representatives of the students, faculty, and administration.

The final report of the Ad Hoc Committee on the University of Denver FM station attempted to define station role and policy in such a way as to insure that the obligations incurred by the licensee were fulfilled while retaining flexibility for programming personnel, primarily students, in to day-to-day operation of the station. Excerpts from the report are offered here in the hope that they may serve as either a model or point of departure for stations attempting to deal with similar problems.

The Role of the Station

Classically, commercial radio stations define their functions and responsibilities in the somewhat amorphous categories of information, education and entertainment.

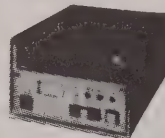
(Continued on page 10)

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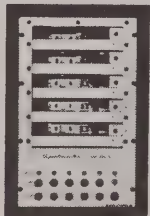


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Record-Play

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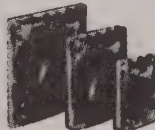
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College FM's Role And Policy

(Continued from page 9)

These categories, normally described in a station's license application to the Federal Communications Commission are in practice translated to programming that the station hopes will garner the largest possible audience. For the commercial station, large audiences mean advertising dollars. Such commercial considerations run counter to broad altruistic objectives allowing a station to serve but a few of the myriad needs of the community it serves.

Ideally, broadcasting should cater to as wide a variety of tastes as possible, the tastes of small audiences and of mass audiences, of cultural minorities and cultural majorities. Ours is a pluralistic society, in culture as well as in ethnic origins and styles of life of its people. A medium of expression as pervasive as radio should reflect and enrich this cultural pluralism. It is in this context that the Committee sees the potential and opportunity offered by non-commercial public radio.

By terms of its license, the University of Denver FM station, KCFR, has agreed to serve the "public interest, convenience, and necessity." It has responsibilities both to the University community and to the larger Denver community. Because of the delicate relationship between the licensee, the Board of Trustees, and the student funding agency, the station cannot be, nor does the Committee feel it should be, an "official" voice of the University of Denver. The station is to be a primarily student operated activity and as such does not reflect any "official" position of the University of Denver. Rather, it can reflect the diverse tastes and expression represented within the University community.

The Committee believes that the station's primary audience should be the University of Denver community, particularly its student community. It is this community that should readily yield an audience desirous of being exposed to inquiry, exploration, innovation and experimentation. Further, it is our belief that within the larger Denver community, there exists many individuals with similar desires. This larger community wants to know what is new in literature, drama, the sciences, music, public affairs and news. It superimposes such groups as educators, students, and the youthful community of Denver. We do not believe that such a

posture necessarily defines the station as serving an elitist audience.

Because of its non-commercial nature, the burden of our responsibility is greater in presenting areas of social concern because we cannot allow a singular point of view to dominate. We must seek out as many view-points as feasible. In pursuing these goals, controversy may arise, but at least it reaches across the gap of misunderstanding and even the most irreconcilable opposition can begin to gain insight into opposing points of view. The position of this station is exploratory rather than inflammatory. The philosophy of freedom and education can best be reached by combining the resources of both the University and the larger Denver community. There is more to the University of Denver than Denver, Colorado, and there is more to Denver, Colorado than the University of Denver. We must use all the available resources at our disposal if we are to serve the "public interest, convenience, and necessity."

Both of these communities have limited resources and to stay within the confines of any one of these communities is, in fact, restricting our purpose as a public radio station. The Denver community has to serve as a compliment to the University resources as a source of program material. Involvement between the University and the community does not mean that the University is taking a stand as an institution but rather, that it is using its resources to help make the community aware of its problems. Conversely, the community should be able to achieve the same interaction with the University. In serving such a valuable function, the University of Denver will be making a necessary and worthwhile contribution to the Denver community while not jeopardizing its position as an institution for the intellectual pursuit. Ideally, we will try to tap all available sources, be it local, national, or world-wide.

Statement of KCFR Station Policy

KCFR exists to engage in broadcasting under terms of a license granted by the Federal Communications Commission. The Radio Board is the representative of the licensee in the formation and review of policy pertaining to both programming and station management. While it is not intended that the Board dictate program policy on a day to day basis, the Board does have responsibility to insure that KCFR stays within the policy set forth by the Board and all applicable rules and regulations.

The General Manager as the chief administrative officer of KCFR executes the responsibility of the Board in the day to day operation of the station and with respect to all programs broadcast by KCFR. The General Manager, the student program director, and staff of KCFR have the responsibility to conduct themselves in accord with the highest standards of broadcasting ethics and will subscribe to the program standards set forth on the Radio Code of the National Association of Broadcasters.

The student Program Director as the selectee of the Radio Board is vested with the day to day program operations of the station including the development of working schedules and staff relationships.

The General Manager and Program Director may delegate to program producers and other staff personnel that degree of authority and responsibility required to enable them to accomplish their tasks. No delegation, however, relieves the Program Director of his responsibility to the General Manager, or the General Manager of his responsibility to the Radio Board for every broadcast that is made on the station.

KCFR program policies specified by

the Radio Board shall from time to time be reviewed. The Radio Board shall maintain the broadest possible program policies concerning what types of programs shall be aired to serve the station's audiences in the most relevant and responsible manner possible. It shall be the responsibility of the General Manager to execute those policies. Any willful violation of KCFR program policies by KCFR staff personnel shall be grounds for dismissal from the staff.

Nothing in the stated policies of KCFR is intended to conflict with the provisions of the Communications Act of 1934 as amended, the Rules and Regulations of the Federal Communications Commission, or the broadcast provisions of the U.S. Criminal Code. The latter documents shall in all cases prevail.

As a matter of general policy, the KCFR General Manager and other top echelon programming and engineering personnel shall be thoroughly familiar with Subpart C of Volume III of the Rules and Regulations of the Federal Communications Commission pertaining to non-commercial FM broadcast stations. Internal procedures shall be developed by the staff of KCFR to insure strict adherence to

applicable provisions of Subpart C by all appropriate station personnel. Particular notation shall be made of engineering and logging requirements.

Program Policies

1. KCFR may not advocate breaking the law.
2. KCFR shall strictly comply with provisions of the U.S. Criminal Code prohibiting broadcast of obscene, profane and indecent language as well as information concerning lotteries, and broadcast involving fraud. While it is recognized that determination of material as either profane or obscene is often difficult, the standards to be applied extend beyond the university community to the Denver community. In all cases, the on-air personnel of KCFR shall exercise reason and good taste in recognizing its responsibility to the broader based community.
3. It is a law of the United States that profane, obscene and indecent language uttered in a radio broadcast shall subject the persons who utter or

(Continued on page 12)

METROTECH PROFESSIONAL RECORDERS

Meets or exceeds all NAB specifications, and offers substantial savings in either mono or stereo models. **Metrotech Recorders, Reproducers and Loggers** — in networks and major stations everywhere. Write for complete information.

► **Metrotech**

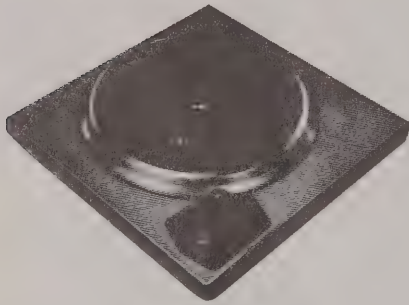
670 National Avenue
Mountain View, California 94040
A Division Of Dictaphone



College Radio FM's Role

(Continued from page 11)

**This is
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world's
finest
and
largest
selling
turntable.**



**Gates
CB-77**

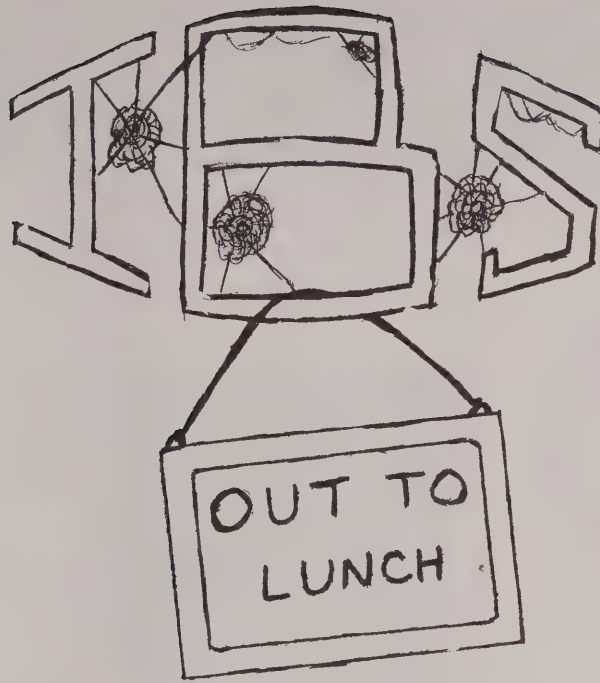
For complete details on the CB-77 12-inch turntable, write Gates, 123 Hampshire St., Quincy, Illinois 62301.

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CORPORATION **GATES**
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permits utterance of to a fine of \$10,000 and prison sentence of not more than two years. The General Manager is responsible for informing station personnel and program participants of this law, especially in preparation for live programs. (18USC 464)

4. Whenever a word or phrase regarded in ordinary usage as profane, indecent or obscene, appears in any broadcast tape of script, the program producer shall refrain from broadcasting the program without the specific authority of the General Manager. The General Manager may decide, on his authority, that, although usually regarded as indecent, obscene or profane, a word or phrase is either,
 - a). necessary for the artistic integrity of a word of literary art, and can on those grounds be defended; or
 - b). so intimate a part of a situation being dealt with by a public affairs program that the character of the situation would be grossly misrepresented by omitting the word or phrase. Whenever under such circumstances the General Manager exercises this authority, he shall notify the Radio Advisory Board in writing that he has done so, and if possible, such notification shall be given before the program is broadcast.
 5. Whenever the presentation of any subject matter involves presentation or discussion of attitudes or actions that violate general standards of respectability, especially in regard to sexual behavior or morals, the program producer shall call the subject matter to the attention of the General Manager. The General Manager shall be responsible for determining the time at which the matter shall be broadcast, if in his judgment special care in handling the matter is warranted. If the General Manager determines that the matter is likely to violate community standards to an extent that could result in punitive action by the FCC or other legal action, he shall refer the decision about whether to broadcast the program to the Radio Board.
 6. It shall be the general policy of KCFR to avoid provoking community attitudes, with respect to profanity, obscenity, or sexual behavior or morals. If provocation is deemed
- unavoidable and is in the interest of broadening the perspectives, reshaping perceptions or opening new possibilities to the radio audience, then the broadcast shall be conducted in a manner that is serious, articulate, respectful of law and community making processes, and shall base its claim to be heard against the community standards on the persuasiveness of the facts or reasons it offers, or the authority of the participants in their fields of work.
7. While KCFR is not required by law to permit use of its facilities by any legally qualified candidates for public office, permission extended to one candidate requires that all other candidates for that office be afforded equal opportunity to sue the station's facilities. It is noted that the law prohibits any power of censorship over the material broadcast by any such candidate.
 8. By law, KCFR is responsible for all material broadcast over its facilities whether originated locally or received through network or other outside sources. Procedures shall be developed by the staff of KCFR to insure adequate review of all material received from outside sources prior to broadcast with the exception that the station may not exercise censorship over material broadcast by legally qualified candidates as indicated in the previous section.
 9. The Fairness Doctrine of the Federal Communications Commission provides that where a licensee affords time for an opinion on a controversial issue of public importance it is under an obligation to afford reasonable opportunities for the presentation of conflicting views. In fulfilling this obligation, KCFR shall actively seek opposing views to matters broadcast which are determined to be both controversial and of public importance.
 10. KCFR shall strictly comply with Section 399 of the Public Broadcasting Act of 1967 which precludes editorialization or support or opposition of any candidate for public office by noncommercial educational broadcasting sections.
 11. All appeals concerning the radio station will be handled by the Radio Board. An appeal of the Radio Board's decisions may be made to the Vice Chancellor for Student Affairs.
 12. The General Manager is expected to

(Continued on page 23)



Happiness is an Open Election

This message brought to you by six regional directors who believe IBS has a future, if YOU vote for it.

MUSIC INDUSTRY DEPARTMENT

SINGLES

ONLY YOU KNOW AND I KNOW
THEME FROM SHAFT
WILD NIGHT
PEACE TRAIN
LIFE IS A CARNIVAL
CHARITY BALL
ONE FINE MORNING
LONG AGO AND FAR AWAY
TELL ME WHY
NEVER MY LOVE
I'D LOVE TO CHANGE THE WORLD
I'M A MAN
ONE TIN SOLDIER
EVERYBODY'S EVERYTHING
TWO DIVIDED BY LOVE
TOUCH
IT'S ONLY LOVE
INNER CITY BLUES
LOVING HER WAS EASIER
FRIENDS OF MINE

DELANEY AND BONNIE
ISAAC HAYES
VAN MORRISON
CAT STEVENS
BAND
FANNY
LIGHTHOUSE
JAMES TAYLOR
MATTHEW'S SOUTHERN COMFORT
FIFTH DIMENSION
TEN YEARS AFTER
CHICAGO
COVEN
SANTANA
GRASS ROOTS
SUPREMES
ELVIS PRESLEY
MARVIN GAYE
KRIS KRISTOFFERSON
McGUINNESS FLINT

ATCO
ENTERPRISE
WARNER BROS.
A&M
CAPITOL
REPRISE
EVOLUTION
WARNER BROS.
DECCA
BELL
COLUMBIA
COLUMBIA
WARNER BROS.
COLUMBIA
DUNHILL
MOTOWN
RCA
TAMLA
MONUMENT
CAPITOL

BREAKS

If You Come Back
Brian Hyland
KRNU
University of Nebraska

Lawman
Jefferson Airplane
WLUC
Loyola University of Chicago

Revolution Won't Be Televised
Gil Scott-Heron
WTCC
Springfield Technical Community College

Gypsies, Tramps and Thieves
Cher
WCDE
Davis and Elkins College

Night Owl
Alex Taylor
KSMU
Southern Methodist University

Your Move
Yes
WMSU
University of Southern Mississippi

ALBUMS

SURF'S UP
LIVE AT FILLMORE EAST
ROCK LOVE
BARK
FOR WOMEN ONLY
LIVE
MARBLEHEAD MESSENGER
CAHOOTS
A SPACE IN TIME
GRATEFUL DEAD
NEW RIDERS OF THE PURPLE SAGE
IN LONDON
LIVING BY THE DAYS
LOOK AT YOURSELF
WELCOME TO THE CANTEN
CHER
RAINBOW BRIDGE
STREET CORNER TALKING
IMAGINE

BEACH BOYS
ALLMAN BROTHERS
STEVE MILLER BAND
JEFFERSON AIRPLANE
STEPPENWOLF
BUDDY MILES
SEATRIN
BAND
TEN YEARS AFTER
GRATEFUL DEAD
NEW RIDERS OF THE PURPLE SAGE
B. B. KING
DON NIX
URIAH HEPP
TRAFFIC, ETC.
CHER
JIMI HENDRIX
SAVOY BROWN
JOHN LENNON

REPRISE
CAPRICORN
CAPITOL
GRUNT
DUNHILL
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CAPITOL
CAPITOL
COLUMBIA
WARNER BROS.
COLUMBIA
ABC
ELEKTRA
MERCURY
UA
KAPP
REPRISE
PARROT
APPLE

DISC NOTES

By **RICK SPENCE**

With this issue, JCR knocks out the walls for the first time to expand the Music Industry Department. It is fortunate that there have been an unusually high number of good releases this month, and that, for a change, they were received in time to get a fair appraisal. I would like to again remind record companies that the address to send albums for review purposes is:

Music Industry Editor
Journal of College Radio
P.O. Box 5141 So. Sta.
Hattiesburg, Miss. 39401

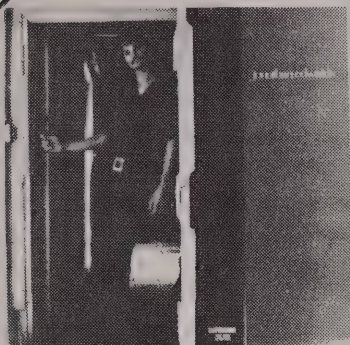
If the product is received before the tenth of each month and has good college audience potential, it will almost certainly appear in the next month's issue.

I recently received what I would like to say is one of the many regular notes from record companies who are concerned as to whether or not our college stations around the country are receiving their product on a regular basis. I would like to say this, but I'd be lying in my teeth, as it seems that only a few record companies realize what a college community can and does do for their sales when its stations are properly serviced. One of the few people to care about the needs of campus stations and who types his own letters to prove it, is Augie Bloom of Grunt Records, the new Jefferson Airplane label. Thanks, Augie. Stations needing service from Grunt may write to Augie at:

Grunt Records
P.O. Box 99387
San Francisco, Calif. 94109

To get back to basics, I'd like to congratulate KSMU, Southern Methodist University, Dallas, Texas, for their apparently well-coordinated music department. They never miss a week with their survey reports to JCR. Some stations must change music directors ever few weeks and forget this routine operation, which can easily happen, I guess. Let's start hearing

(Continued on page 16)



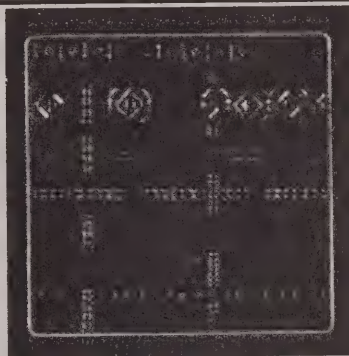
JONATHAN EDWARDS CAPRICORN SD862
(Jonathan Edwards)

Already making it on the campus scene, this Minnesota native turns soloist again after five years group action. Give a listen to "Sunshine," "Everybody Knows Her" and "Train of Glory."

FIND THE SUN
(Crowfoot)

ABC ABCS FR 745

Led by Russ DaShiell, lead singer and songwriter, this veteran San Francisco group pulls together an album which leans slightly "up." Good possibilities on every track.



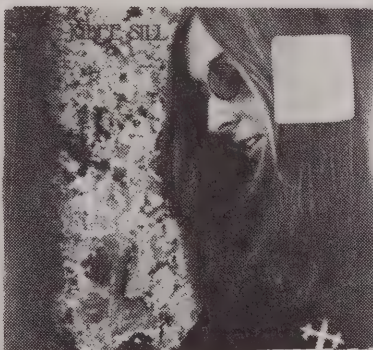
THROUGH THE YEARS COTILLION SD 9048
(Freedom)

No way to miss for progressives and under-grounds with this collection of top rate tunes. Three man group makes very effective use of Moog on many cuts. Take your choice on this one.

JUDEE SILL
(Judee Sill)

ASYLUM SD 5050

Jumping on the Jesus bandwagon, Judee Sill steams toward the Top 40 horizon with this group of diversified tunes. Potent album includes Turtles' "Lady-O." Others with appeal: "Jesus Was A Cross Maker," "My Man On Love."



ASTRAL TAXI
(Tin Tin)

ATCO SD 33-370

Produced in London by Maurice Gibb of the Bee Gees, Tin Tin seeks to claim album honors a la "Toast And Marmalade For Tea," which soared high on Top 40s recently. The influence of the Bee Gee style on the group is apparent. Sounds as though Tin Tin will hit with these tracks.

Disc Notes

(Continued from page 15)

from some of you northern and western stations who have been regularly out-distanced by stations in other sections of the country (choice of two-sections, not countries).

One thing that I have noticed that could help stations to get better single service is for certain record groups, such as ABC/Dunhill, to name one, to stop sending three and in some cases four mailings of the exact same product to the same station at the same time. Such companies could save themselves a lot of money by updating their Addressograph files, as this appears to be one of the apparent causes of this waste. After the files have been cleaned up, it would also be a good idea to start servicing stations who need service on a regular basis. After all the stations have been added to the files, there would still be a substantial surplus of records which had previously been mailed in duplicate to the same individual station under various names and titles at the same address, such as General Manager, P.D., M.D., Music Librarian, Super jock, and Janitor. I know of one fellow who uses duplicate copies of Top 40 hits to level his furniture. He owns a hotel. Get the message?

See ya' next month.

Other New Releases

BETHLEHEM ASYLUM AMPEX A 10124
Bethlehem Asylum

MAGIC RARE EARTH R527L
Magic

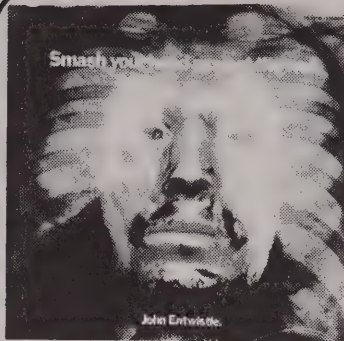
OLLIE MOGGUS AMPEX A 10128
Bob Hinkle

TONTO'S EXPANDING HEADBAND EMBRYO SD 732
Zero Time

HIROSHIMA AMPEX A 10123
Wishful Thinking

CHARLES JOHN QUARTO ATLANTIC SD 8294
Charles John Quarto

WHOLE EARTH RHYTHM UNI 73116
Saddhu Brand

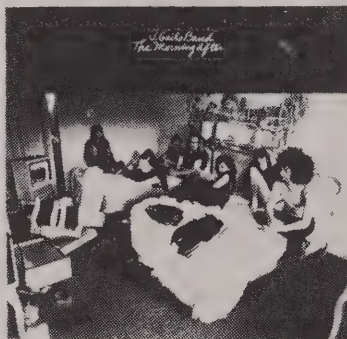


SMASH YOUR HEAD AGAINST THE WALL (John Entwistle) DECCA DL 79183

Eerily reminiscent of Ringo Starr on a few tunes, John Entwistle should make the cross-over between Top 40 and Progressive with "My Size." Running a close second and third are "Ted End" and "I Believe In Everything."

Gayle McCormick DUNHILL DS 50109 (Gayle McCormick)

First time out as a soloist for Gayle since splitting with Smith, this LP leads off with her recent Top 40 climber "It's A Cryin' Shame." Solid rehash on such oldies as "Natural Woman" and "Rescue Me" should help to boost this one along.

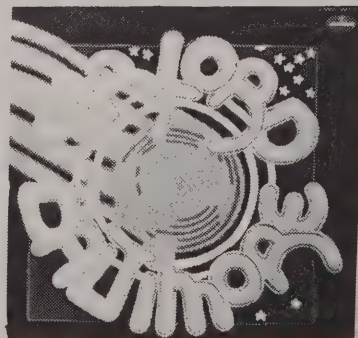
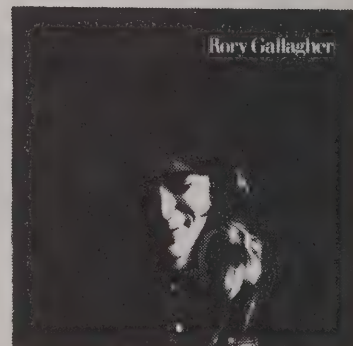


THE MORNING AFTER ATLANTIC SD 8297 (J. Geils Band)

Ballsy blues style is the keynote of the band with "Whammer Jammer" setting the pace for a lot of great sound. Try "Looking For A Love" to get it moving, then you're on your own. Heavy college appeal assured on every cut.

RORY GALLAGHER ATCO SD 33-368 (Rory Gallagher)

With roots in blues, Irishman Rory Gallagher broadens his horizons after leaving Taste. All original material, this one should be received well on the campus.



SIR LORD BALTIMORE (Sir Lord Baltimore) MERCURY SRM 1 613

If you thought a new acid-rock group was just around the corner, you will be pleased to know that Sir Lord Baltimore is here. SLB jams their way through some of the most ingenious original tunes around this album. A must for progressives: "Chicago Lives" and "Where Are We Going."

Basketball Reject Finds Television

by Frank Kehoe

To most guys, getting cut from a high school basketball squad spells the end to secret hopes of someday playing as a member of the Knicks, or Lakers, or the Pistons. But in my case it also became the beginning of my experiences in television.

I was in one of those "whatthehell" moods that only come over me after a particularly dismal failure. It's the realization that no matter what I tried I couldn't fall lower. Sitting in front of the TV, I watched a new television station's fledgling efforts to present a local newscast.

The station was located in the City of Jamestown, some 45 miles distant from my home town of Salamanca, New York, in the largely rural southwest corner of the state. The station's news format covered my own home town in addition to Jamestown and a few other surrounding communities. Suddenly a story about my home town came on.

The story was recorded off the telephone with an announcer from a town near mine using his telephone as a microphone to a tape recorder in Jamestown. The announcer simply called the station from his town and recorded the story.

Having had two years of radio experience on a local radio station as an announcer after school and on weekends, I had used the technique many times both to send and receive stories. I was sure that I could provide news from my town the same way.

As the newscast ended I dialed the new station and asked to speak to the news director, Brian Kahle. I told him that I was interested in being a "stringer" for the station. He said he'd talk to the station owner and call me back. The next day the call came and I was offered ten dollars a week for all the news I could dig up. By the following Monday I was operating a small news bureau from the sunporch of my home.

Gathering the stories from local sources by phone, I wrote them and phoned them to Jamestown to be televised along with a slide with my name on it. The viewers saw the slide saying, "Skip Kehoe reporting from Salamanca," as they listened to me, by recording, give the story. For four months I continued as a stringer.

In April I got the surprise of my life when Mr. Kahle called to tell me there was an opening on the staff for a weekend sportscaster and weatherman, and he asked if I wanted the job.

Could I handle the job? Would working weekends allow me time enough for necessary homework? Would I be able to work late Sunday night and then get up for school Monday? Questions ran through my head. And on top of everything else I would have to get my night driving permit to get to and from work. But slowly everything boiled down to the simple solution of

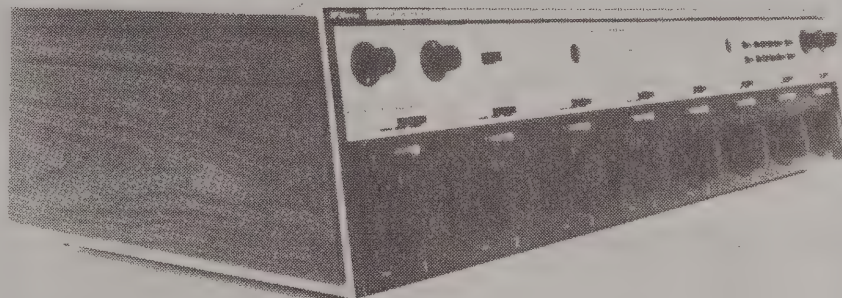
try and see.

The first day I was to go on the air I wasn't so sure about my "try and see" idea. I didn't know a thing about television; nor had I ever even seen a television studio before. The one in which I'd work was very large, big enough to be a hanger for about two single engine planes. The ceilings were about 15 feet high and dozens of black spotlights hung from them, pointed at the various sets in the room.

There was a news set consisting of a false plywood wall about seven feet high and a desk on rollers to make it moveable.

(Continued on page 18)

the mcmartin consoles



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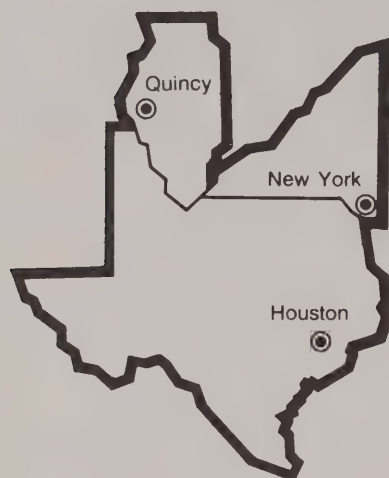
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Basketball Reject

(Continued from page 17)

The sports set consisted of another false wall and a chair that sat upon what appeared to be an orange crate, seating the announcer about five feet off the floor on the precarious perch. That was one of the sets I'd use.

The other set that concerned me was the weather set, another plywood wall with a map in the middle. The map was about three feet square and covered in hard, clear plastic. I had to draw weather fronts on the map with the aid of a map drawn by the weather bureau.

On each side of the map hung two plastic covered lists of area towns and cities. The lists left a blank space after each name for a temperature. Another list also hung on the wall on which I would write the T, H, & B, the temperature, humidity, and barometric pressure; along with the forecast for the next day and that day's high and low temperatures.

In front of each of the sets the omnipresent spotlights hung low throwing out oppressive light and heat at anyone using a set.

About two minutes before I was to go on with the weather for the first time, I had just completed drawing in the fronts on the weather map and all of the other statistics. I glanced over to Mr. Kahle as he finished the news cast. Relaxed and friendly he looked into the camera in front of him as perspiration beaded on his forehead from the heat of the lights. Fortunately the camera didn't pick up the moisture glistening off his face.

He was at the far end of the studio from me and worked without begin aware of my presence. No matter what the situation the man in front of the camera can't look as though he's interested in anyone but the audience on the other side of the lens.

The cast ended; the red tally light on the front of the camera went out and an engineer rushed into the room to roll the camera down in front of me. The cameras were small ones, not the kind traditionally pictured, so huge and impressive. They looked like gray metal shoe boxes with black lenses protruding.

After the two cameras were placed the engineer rolled the monitor into place. It was a large television without a sound attachment that showed whomever was in front of it what was being broadcast. A

commercial was on the air as he parked it just behind the cameras about six feet from me.

I was scared. I suddenly became very aware of my only being seventeen; I was too young for this job. But there was no backing out now. "Smile, smile, smile," kept running through my head. I was sure I'd forget the sponsor's name. "Remember: first the national map, then the statistics, then break for a commercial, then back with the forecast. Look at the camera. Only glance at the cue card beneath it," my check list kept running through my crowded mind.

Thirty seconds, I suddenly was aware of the oppressive heat that poured out of the spots along with the blinding light that inundated the set. Fifteen, the engineer snapped a microphone chain around my neck. The cord off the mike, clipped to my tie, ran down to the floor in front of me; the engineer told me to run it to my waist, then around behind me tucked into my belt. The red light on a light bar atop the monitor snapped out, followed by a yellow light snapping on, "stand-by", five seconds. The speaker on the wall came to life with the weather theme, a series of chimes, "And now the weather brought to you by ———," a voice said.

The yellow light went to green. The red tally light on one of the cameras glared. My face appeared on the monitor. I heard myself say: "Good evening and welcome to the weather. . ."

I don't remember much for the next two minutes as the weather cast proceeded until the closing line: "I'll be back in just one minute. . .with Sports."



BETTER YET...

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COLLEGE RADIO CATV FM

by John Bry

WCDE, besides being carrier-current AM, is now CATV FM as well. WCDE is the student owned-and-operated radio station at Davis and Elkins College in Elkins, West Virginia. It has been off-and-on since some murky time prior to 1956 when it was destroyed in a fire that consumed the upper stories of the campus science building. In 1968, through a slew of anonymous contributions, WCDE was able to entirely revamp the ancient homebrew equipment in its studios and install new LPB transmitters in the dormitories. Now, in 1971, it is the only AM-FM station in Elkins.

Probably the biggest obstacle in our going FM was the opposition of the owner of the town's commercial AM station (which is also the only commercial station for thirty miles around!). He was afraid that we would cause his advertising to fall off and he fought like a devil to keep WCDE's signal only on campus. We had tried once a few years ago to go on the cable, but were blocked. With a changeover in the management of WCDE, another attempt was made. This one succeeded.

Jim DeFontes (Baltimore, Md.), General Manager, negotiated with the owner of the Tygart Valley Cable Company in Elkins with an eye to trying his darndest to pull this one off. After checking with the company's engineer about FCC regulations, he found that there was little that applied to this type of operation and it would not be necessary to file for a license application. Jim then found little opposition - even encouragement - from the owner of the CATV system. But the owner of the commercial AM station was on our backs instantly. We decided that we would go ahead utilizing the following rationale: "The idea of radio is public service and the town station was not serving all the public since their easy-listening and C & W format did not appeal to the teenage through twenty-five age group. (People of that age just are not interested in hearing the obituary column read over the air!) However, to be on the safe side, since so much pressure was being brought to bear from the town station, Jim had a lawyer draw up a contract between the cable company and WCDE allowing us

to broadcast our full programming (including commercials) on a spare channel for free providing that we supply the FM modulator for the system. The contract is to run for a two year period, upon which time it is automatically renewed. It may be cancelled - effective at the end of each two-year period - upon notice from either party involved.

The college administration - especially the college President - backed us all the way. The President even fought off a verbal attack from the owner of the town station - a little good publicity (such as a new

broadcast facility) never hurt a small college.

The modulator is a model AFM-2 purchased from Jerrold Electronics in Philadelphia through a local distributor. We ordered the unit with a crystal cut for 90.1 MHz. This piece of equipment was relatively inexpensive - \$250 - and works wonderfully. It may even be used to broadcast via direct radiation (with the requisite license, of course) as it has a final input rating of 55 dbj or 40 watts. The owner of

(Continued on page 20)



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CATV FM

(Continued from page 19)

the cable company later informed us that the next time we want something like this (to, perhaps, put WCDE on adjacent cable systems), to have him buy it since he gets a discount and could supply us at a much lower price. We then contracted the telephone company and had them install a line to feed our audio signal to the CATV system. Cost, again, was fairly good - \$15 for installation of a Schedule F (unequalized) local line, with a \$10 per month rental fee.

With all that taken care of, WCDE officially became an FM transmitting power on the twenty-sixth of April of this year. John Bry (Cherry Hill, N.J.) the Chief Engineer, installed a cut-off switch on the main console in Studio A so that we could, should we so desire, feed a separate program to the FM. We monitor our transmitted FM signal with a Heathkit FM tuner that feeds the station's air monitor speaker system.

As far as listener reaction is concerned - WOW! We dig it! WCDE has been a hit on campus since our only "competition" has been (and still is) that town station with their definitely different format. Most of the students are from bigger cities and towns than Elkins (population about 10,000) and prefer the Top-40 and progressive rock sounds that are found there. Oddly enough, we have found that the teens and older townspeople also groove on it. Since inception of the FM, we discovered through various grapevines that these kids have been trying terribly hard to pick up other stations such as clear-channel WABC, WCFL and CKLW; they have even gone to such lengths as longwire antennas in the backyard - and one enterprising young engineer in the local high school had come up with a super-selective AM tuner backed up by a ton of amplifiers! With a demand like that, how could we fail? Our programming has been mainly up to the individual jox and it is mainly Top-40 and progressive rock. So now everybody (almost) loves us!

For our Top-40 shows we had been using *Billboard's* Hot 100 chart and livened the shows with jingles of our own making. Needless to say, with *Billboard's* chart reflecting national sales ratios (and thereby being, by nature, a very slow and dull chart) and with our own jingles, the programming was not entirely professional-sounding. Recently, our Program Director

Dave Saffel (Morgantown, W.Va.) had us lay out \$100 for twenty jingles from Concept Productions and began making our own chart. Jim Ward (Johnstown, Pa.), Music Director and Traffic Manager, has been slaving over the task of selecting the forty hits as well as our five "Disc-overies" each week. We have the college service center mimeograph about 400 copies of our "Marvelous Managerie of Music" weekly which are then distributed to four or five local stores. The survey is usually gone by the second day, according to most reports from store owners. Now our programming sounds beautiful. We have five or six jox that could make it in Real Radio (three or four have career intentions in that area) and the rest are quickly improving. For those times of the day when there are "holes" in our program scheduling, some of our jox have cut two-hour tapes with golden hits. These are used alternatively with "Auto-Jok" (our automated programming system built from the guts of an old Seeburg jukebox) to give the audience solid music and news all day. (Incidentally, we do program twenty-four hours each day - which is more than the local commercial station! - utilizing this system. A cart machine is triggered while Auto-Jok is changing discs to provide life-like jingles and voice-over ID's.)

We had the local newspaper take pictures with the intent of publishing a story on opening day, but they were a bit slow. Even so, with hardly any advance publicity, our first day of AM-FM operation found the hitline swamped with record R & D's. We made station promos announcing ourselves to the town and offering such services as a community bulletin board and the opportunity for local businesses to advertise with us. We also planned and advertised an open house of which many people took advantage during our first week. A name-it-and-claim-it deal with our single dupes has been helping immensely. And, due to WCDE being the only rock station for thirty miles around, we have proclaimed ourselves the "Tygarts Valley Music Authority" and work ourselves to the bone living up to the name. And, although our "competition" has just instituted a four-hour rock show based on *Billboard's* Hot-100, they just don't have what it takes to recapture our audience.

As a programming note, we have found that Record Source International (from whom we have been serviced in the past) is far too inadequate by itself for our

(Continued on page 23)



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Order Form—Page 24

Engineering

(Continued from page 8)

one even had the hot wire brought on the ground pin!

Other lethal potentials exist in transmitters and audio gear. A lot of home-built carrier-current equipment has four or five hundred volts available to the touch on plate caps, meter jacks, and terminal strips. Transmitter test setups frequently have B+ wiring festooned across the work bench. One of the remote overmodulation lamp terminals on the H-P 335B FM monitor presents several hundred volts even when the unit is turned off. These are all traps waiting for a victim.

The cures for these evils are pretty straightforward: check out the outlets and cords in your shop and studios, use the third wire, be cautious in making test setups, and cover the high voltage access points. In addition, when installing equipment, always make the ground the first lead on and the last off. Another habit to develop: when plugging a shielded cable (coaxial or audio) into a chassis, hold either the connector or the chassis but not both.

Shocks will still occur, even with caution. If the victim is lucky he gets a good jolt and that's all. If not, he winds up unconscious, not breathing, and with a fibrillating heart. Once freed from the voltage, a victim in this fix needs immediate mouth-to-mouth resuscitation and closed-chest heart massage, not ten minutes hence when help arrives, but NOW. At the very least, your station needs an instruction card on the wall on how to apply these life-saving items, plus a posted list of emergency telephone numbers; much preferable, the entire engineering staff should be trained as well. The local fire department or Red Cross unit can supply the necessary information. In calling for help, get both an ambulance and the fire department rescue unit, which is generally better trained than ambulance attendants. In case this all seems too grim and remote to happen: the writer once attended the funeral of a transmitter technician who could probably have been saved with resuscitation and heart massage.

A different hazard is low-voltage high-current wiring, as anyone who ever dropped a wrench across a car battery can attest. The problem here is sparks and heat; the risk appears in high-power transistor supplies and high-ampere heater wiring in consoles. Leads of this sort should be

taped, protected, and fused as carefully as high voltage lines. Storage batteries for backup AC power systems must be protected with a gas-tight fuse close to the battery. A short on an unfused battery can cause quite a mess.

A unique risk occurs in bulk tape erasers, which overheat badly if left on, or if a heavy object is accidentally set down on their "on" buttons. A number of near-fires have occurred this way. All potential users should be warned of this problem.

Lightning and power contacts on remote lines present combined shock and fire hazards. The shield of a coaxial RF cable must be bonded to ground wherever it enters a building, as well as at points along the route if run overhead. The same is true of audio cables, which need telephone-style protectors too. Remote crews should recognize that even with normal protection, lightning surges on remote lines can reach 350 volts to ground even if the strike occurs nowhere near the cable. These pulses will be capacitively coupled to the remote board unless it is tied to ground. Another lightning hazard is common on FM antennas: they must be bonded to the station ground with a strap which also ties to the feedline, tower light conduit, and building ground. The bonding has to be solid enough so that all these items will remain at a similar potential while passing a 10,000-amp lightning stroke!

Solvents and chemicals common in the engineering shop tend to be detrimental to humans. Carbon tetrachloride ("spot remover") is still commercially available despite being a dangerous cumulative poison. Xylene and trichloroethylene are as effective as solvents but much less hazardous. Ferric chloride etchant for printed circuits is highly corrosive. The reports of danger in machining Teflon and soldering Teflon-coated wire common a few years ago have been disproven, but beryllia ceramic, used for insulating VHF power transistors, now turns out to be poisonous. Uncured silicone rubber compound and epoxy cement are highly irritant to the skin and eyes, as is silicone grease. Mercury rectifiers must be treated and discarded with care; breaking one releases mercury vapor into the air. VR tubes contain traces of radium bromide or krypton, and thoriated-filament power tubes incorporate small amounts of thorium, all of which are radioactive. This is not to scare anyone away from handling these items, but to encourage a healthy degree of respect.

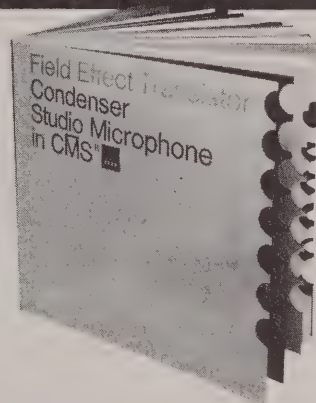
Radio frequency power has dangers of

(Continued on page 22)

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Order Form—Page 24

Engineering

(Continued from page 21)

its own, the most familiar manifestation being RF burns. Most transmitter men are relatively unconcerned about this item, but an arcing-type RF burn at a few hundred watts can be deep, dangerous, and slow to heal. A less familiar effect but one which is now receiving close attention is RF heating. This is primarily a UHF/SHF effect, the best examples being microwave ovens and radars. It involves the dielectric heating of body tissues, leading to clouding of the cornea of the eye and to temporary sterility in men. There are other, less understood, effects. The U.S. standard limit on human exposure under normal temperature and humidity for long periods of time is 10 mW per square centimeter of body surface, but the Soviet limit seems to be only 1 mW/cm². As a result, men working at heavy-route microwave relay stations in front of antennas or rerouting hot waveguides with 150 watts or so total power in them are required to wear woven screen protective suits, and technicians are not permitted near omnidirectional antennas at mobile telephone base stations handling only a few hundred watts in the 35-450 MHz band. Low-power FM is no problem (with 10 watts into a single ring antenna, the power density three feet from the center of the antenna is much less than 1 mW/cm²), but extended work on a tower with FM power above a kilowatt, especially on a hot day, is questionable.

Some special risks occur in installing audio and carrier-current RF lines underground, and suitable caution is necessary to neutralize them. The only safe way to remove manhole lids is to use a J-shaped tool made from a piece of steel rod. Prying covers off with a screwdriver is a sure cause of mashed fingers. Traffic barricades are necessary around the area before opening the manhole, and someone must be posted above ground to watch for hazards.

Once the cover is open, certain risks remain. In urban areas especially, there are frequent underground leakages of heating gas, gasoline vapor, and sewer gas. These all collect in manholes, and it is standard utility company practice to test the air in the manhole with a gas detector set before entering, after unplugging a spare duct, and every two hours thereafter. To clear out these gases and non-explosive but dangerous products such as carbon dioxide, the practice is to run a high-power blower into the manhole. Open flames in manholes are always forbidden. Manholes on college

campuses may or may not be safe. If the vault smells of gas, the gas company will normally come out and test the atmosphere.

The workers in the manhole should wear hard hats or, at the very least, surplus helmet liners. There is just too much loose material that can fall in on them otherwise. Eye protection is wise too: a lot of dirt and water flies about when pulling cable. Contact lens wearers particularly need protection.

Great caution is necessary in using a winch or car to pull cable. The energy stored in a taut winch line causes a violent whiplash effect if the line breaks, and people had better be out of range. Good communications are a must between the feeding end and the pulling end to stop the pull if a snag occurs.

In the West at least, black widow spiders are often found in vaults, and a careful inspection before beginning work is in order.

Line installation in steam tunnels has most of the risks of a manhole job plus a few of its own. The temperature in the tunnel can reach 140 degrees, and even experienced steamfitters have been known to pass out. It is highly prudent to have an outside guard to go for help if needed. It is wise to stay away from the piping itself, as the reliability of cast iron pipe after 70 years' exposure to high pressure and temperature is not certain.

Overhead line work has certain risks also. A major part of the problem is making sure the poles are sound enough to climb. A few simple steps will give an estimate of a pole's condition. A close inspection near the ground line will reveal fungus or insect infestation, as will probing the wood beneath the ground with a long screwdriver. A vigorous blow with a two-pound hammer near the ground will cause the pole to ring, a little like thumping watermelons: a solid pole will give a "solid" sound, a defective pole a mushy effect.

Another risk is that earth grading in the area may have cut away the ground from the base of the pole. If this appears possible, check the location of the seller's brand stamp. It is normally ten feet from the butt of the pole, and can be used to estimate whether the pole is buried three feet - or six inches - deep.

If the lineman wears climbers, they must be sharp and he must dig in solidly with each step. Where considerable work is to be done on a stepped pole, splicing for

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CATV FM

(Continued from page 20)

new chart. We are now being serviced by most of the major labels and a record jobber.

Our advertising has naturally picked up considerably, which helps out the budget and will offset our new FM expenses in the near future. In addition, our business manager Dan Hughes (Ebensburg, Pa.) is busy soliciting national advertising. We have two companies already at work. They have pointed one PI ad at us and are working on more.

Technically, we did run into one stumbling block that seemed insurmountable at the time. Our transmitted FM signal had a sixty Hertz hum on it that was a bit disconcerting. This hum seemed to be originating with us since both the cable company and the telephone company checked and rechecked their equipment — reporting each time that their end was OK. Our Chief Engineer went out of his mind trying to track down the trouble. The problem was compounded by the fact that, since the installation of the FM feed, the rest of our audio feed system to the dormitory transmitters also had developed this same hum. Finally, with a little suggestion from Ludwell Sibley of IBS we solved all the problems at one stroke. Since our audio feed from the console was split by resistive splitter pads and each tap terminated in an isolation transformer supplied by the telephone company, the feed lines were then electrically balanced with respect to ground. The input of the Jerrold AFM-2, however, is unbalanced and the telephone company installer did not put an isolation transformer on the head-end installation. The resultant mismatch did not do our signal any good and apparently the hum was generated into the rest of the system due to it.

With that out of the way, the only thing left was a minor complaint that was soon remedied. Occasionally, we would notice crosstalk that could only be originating in the telephone feed line. Since the telephone company system utilizes inductive coupling between lines in the central office, voices and the ring signal sometimes bled over into our line because we were not feeding it at a high enough level. In fact, our feed was considerably lower than the 0 db used by the telephone company system. After upping our signal level (and compensating for the raised level at the modulator), we found our entire broadcast system was technically remedied.

We have been considering contacting CATV cable companies in adjacent towns for the purpose of installing other modulators in their systems, thereby broadening our potential audience, which means more publicity, increased revenue, and of course, the resultant responsibility of having the top station around. The only hitch here is the FCC. Lately, they have been checking into cable systems and college radio in general. They may resent the fact that they have almost no control over us as a college station (however, our present call letters were assigned to WCDE by the FCC in 1951) and try to limit such a system. This would be a cogent point for discussion because, in broadening ourselves, we would be over-reaching the

(Continued on page 26)

College FM's Role

(Continued from page 12)

bring before the Radio Board critical matters concerning station policy.

KCFR has been on the air since November, 1970. Its first year of operation has been marked by the gathering of a listening audience sizeable enough to voluntarily contribute enough funds to keep the station on the air during the summer months of 1971. A feasibility study is currently underway that may eventuate in the station's substantial increase in power allowing it to qualify as the Denver affiliate of National Public Radio and for development grants from the Corporation for Public Broadcasting and the Department of Health, Education and Welfare. The tensions created by the potential hazards of administration-student differences have been remarkably absent on a campus that just the spring before the station went on the air grew to its full potential with the presence of the National Guard on the campus. Perhaps this is the real measure of the intensive and careful planning required when one defines the station's role and policy and creates a structure or mechanism that will allow that role and policy to be achieved.

IBS Spring Convention

The National Convention Committee of the Intercollegiate Broadcasting System has selected New York City as the site for the Spring convention. The theme for Convo 33 will be "SPEAK OUT".

Engineering

(Continued from page 22)

example, it is safer and more comfortable to wear climbers and spike in at the work height rather than standing on the steps. Safety belts need inspection before each day's use.

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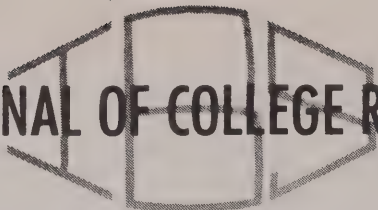
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PERSUASIVE DOCUMENTARY

(Continued from page 4)

program wants them to do. Such action is the end purpose of the persuasive documentary it must be a dramatic editorial for a point of view. It achieves this status by dealing with controversial contemporary problems, by the bias of selection (but not the distortion of factual matter), by the use of emotional materials, and by script appeals for action by the listener.

The fourth guideline to use in constructing the persuasive documentary states the simple proposition that no documentary can be successful unless it attracts and holds attention. It must be aurally exciting and intellectually interesting. The lack of plot and dialogue frequently causes the local writer to turn to the interview for source materials, and this is by all odds the least interesting device available to get and hold listener attention. Our ears are stimulated by any combination of these devices: appeals to areas the listener considers vital to his life, suspense, contrast, comparison, novelty, and so forth. (In television, the writer has visual excitement to manipulate through the intensity of the images or the relationships of design areas in black and white reception.) Intellectual curiosity is stimulated by the creativity shown in the juxtaposition of ideas, by the aggressiveness perceived in the analysis of the problem and the setting forth of the proposed solution to the problem, and by the interpretation given to the conclusions that are drawn from the factual materials.

To attract and hold attention, care should be given to the organization of the script along traditional lines of introduction, body, and conclusion. Introductions must capture attention immediately, with something exciting and startling happening in the first minute, or listeners tend to shy away. In the body, the central thought must unify the whole structure, in order to maintain interest. And the body must be organized in a psychological way: the organization must not leave blank spaces for the listener to fill in; proper sequence, proper connections, proper structure must be evident; the big idea must stand out to be easily grasped. It must be remembered that the audience hears the program at the pace the producer sets, and cannot go back to "re-read" a page of script. And since the listener remembers best those points he hears first or last, the persuasive documentary places its important points there.

When this type of organization is tied to psychologically motivating factors, such as sex, or the desire for protection or acquisition, or any of the basic drives set out in standard psychology textbooks, we can begin to say the body of the documentary is interesting. Organization of the conclusion to maintain interest must revolve around the stress placed on the "best" solution to the problem. Audiences want alternatives outlined, so a suggestion as to proper course of action is not amiss. This is not to say that the script should be so constructed that only one alternative is possible; such slanting of the facts usually is not to be condoned since most socially significant contemporary problems are controversial simply because there is more than one possible solution. Nonetheless, because one sees the problem in a certain light, because one sees certain facts as more important than others, and for a variety of reasons, one usually prefers one solution over another; and the persuasive documentary should stress that solution in its conclusions if it is to qualify as a social document. Thus the conclusion must make very clear what is expected of the audience; and it should recapitulate the central thought and purpose of the program.

Not all documentaries are designed to persuade the listener to a point of view, of course. But to be persuasive, the documentary must follow the guidelines set forth in this article. The script must make its points directly to the listener, usually through the use of a narrator, stress a central thought based on fact, and be designed rhetorically to face a real issue and arrive at a real solution. The program must use scholarly research to authenticate ideas, should present materials without distortion of basic facts, and must build toward a conclusion by selecting a central thought on which to peg facts. The juxtaposition of facts can be arranged to lead to the conclusion desired. Such arrangement should be bolstered by selection and use of emotional material. The purpose, in fact, of the persuasive documentary is to present a reasoned solution to a socially significant contemporary problem in an emotional setting. If the program does not do this, it is not a persuasive documentary; if it does, we begin to say the documentary is persuasive.

Changing Your Station

(Continued from page 6)

block of time devoted to entertainment, a good portion of the listening audience which might otherwise develop would be lost. At WLTI, the entertainment programming occupies slightly less than 75% of our broadcast time.

The reader may notice that nowhere have we adopted an objective requiring that we sound like a professional station. With a serious attempt to meet the five objectives listed, we feel that the professional sound will follow naturally. If a choice must be made, the listed objectives take precedence.

With these objectives as a foundation, WLTI is in the process of making a significant and purposeful change. The objectives were designed for us alone, and were not intended for general use. Some modifications may be necessary before they can be applied to another station. Needless to say, you, the reader, are invited to borrow any or all of them, and to twist and contort them in any way, shape, or manner necessary to make them work for your station.

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NEWS BRIEFS

IBS Opens Stations Relations Office

IBS has opened a new Stations Relations Office to handle an overwhelming increase in membership during the last few months. Jeff Tellis, of WPKN is director of the office. Jeff outlined the goals and future of the new facility. The office will handle routine conferences and consultations with the membership, and will set up field reps throughout the country and overseas to provide closer ties with the stations. Members are encouraged to call or write Jeff with their problems. The address is WPKN, 244 University Boulevard, Bridgeport, Conn. 06602. (203) 334-2682. Jeff is looking for field reps. . .if you're interested, give him a call.

FTU Communication Program OKed

A graduate program in Communication has been approved by the Florida Board of Regents for Florida Technological University in Orlando. The program is behaviorally oriented with opportunities of emphasizing areas of journalism, radio-television, or speech.

Thomas Named KWMU General Manager

Robert W. Thomas has been appointed general manager of KWMU, the FM radio voice of the University of Missouri-St. Louis, it has been announced by UMSL Chancellor Glen R. Driscoll. KWMU-FM will go on the air early in 1972.

Thomas comes to UMSL after serving as general manager of WEKT, an FM station in Hammondsport, New York, which he put on the air in October, 1970. Before that he was an executive producer at WCNY-TV (Channel 24) in Syracuse, New York. Between 1961 and 1968, Thomas was associated with Northwestern University, Evanston, Illinois, as a producer of radio and TV programs, as an instructor in the Department of Radio-TV-Film, and

earlier as manager of WNUR-FM, the campus radio station.

Thomas, who holds bachelor's and master's degrees in radio-TV from Northwestern, is a member of the National Association of Education Broadcasters and has been active in the Jaycees in Illinois and New York.

KWMU-FM will broadcast in stereo with 100,000 watts of power at 90.7 on the FM dial.

Grasty Given Promotion At Florida Tech University

Dr. William Grasty, former chairman of the Department of Communication at Florida Technological University in Orlando, has been promoted to the position of Executive Assistant to the President. F.T.U. is presently conducting a search for a Departmental Chairman. Communication encompasses the areas of Broadcasting, Journalism, and Speech at Florida Technological University. Inquiries should be addressed to Department of Communication, F.T.U. box 25,000, Orlando, Florida 32816.

CATV FM

(Continued from page 23)

radiation spread of the local licensed commercial station. Although we know of no regulation prohibiting them from doing as we have, the FCC may have something here to investigate. It may be argued that we are forcing the licensee to result to the cable system to reasonably compete in the audience-market. The only real defense we have is that which we used previously: broadcast radio is a public service, and no one broadcast facility can possibly hope to serve all the public.

Going on FM cable was not all that hard. . .or expensive. Total cost for setting up the deal was under \$300. At that price, just about anyone could do it. If anybody is interested in following our work and would like additional information, they should feel free to call or write to WCDE (c/o Davis and Elkins College, Elkins, West Virginia, 26241) and we will be more than happy to help as much as we can.

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MANAGING TODAY'S RADIO STATION By Jay Hoffer. A collection of critiques on the art, outlining principles evolved by the author during his 20 years as a broadcaster. Organized into three sections, the content encompasses management, programming, and sales. Part 1 considers two sides of a manager's environment—the personal and the impersonal—with comments on his many duties, from politics to personnel. Part 2 covers programming, primarily from the management viewpoint, although also of value to the program director and announcer. Part 3—Sales—offers help in finding and training salesmen, holding worthwhile sales meetings, setting rates, developing sales leads, etc. Order No. 461
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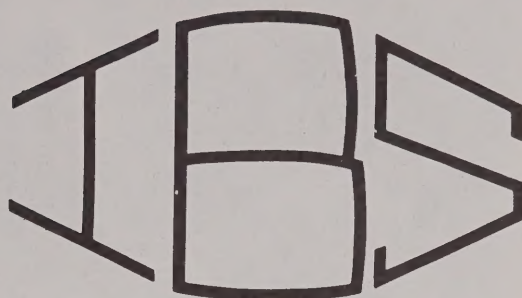


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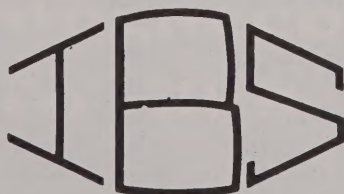


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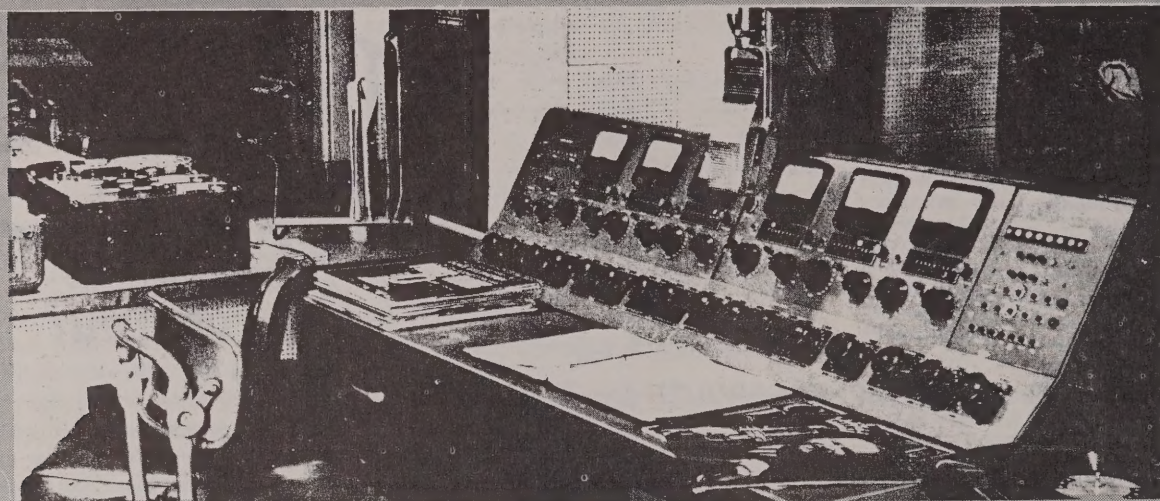
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EDITORIAL

Much has happened during the past three months concerning the leadership of IBS. The entire problem is very complex resulting in new elections being held this winter.

Unfortunately, by the time you receive this issue, the new nominations will have been made. The Court ruling stated that the nomination list must be mailed by October 15, 1971. This list must also contain a notice to all voting members telling them that counter nominations, biographies, and certification of the counter nominees consent must be returned by November 5, 1971.

On November 12, a ballot containing the names of all nominees was to be mailed. These ballots are to be returned no later than midnight, January 7, 1972.

If a quorum is not achieved so that there be no valid election, the Regional Directors shall then be empowered to cast a ballot for each voting member in his region which did not return a valid ballot. This is to be done after first attempting to contact the voting members in his region to determine the vote they wished cast by the Regional Director on their behalf.

On February 18, 1972, the results of the election will be announced and reviewed by the Court.

Members who had voting membership as of September 27, 1971, are entitled to vote. (This points up the necessity of all stations to apply for voting status. Check and see if your station is an associate or full member. If your station is eligible

for voting status, contact the Member Services Office, Box 592, Vails Gate, NY. 12584.)

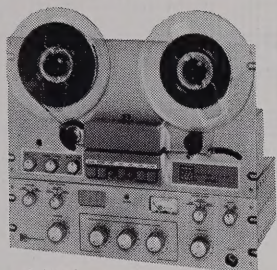
The plaintiffs in the suit, called SERVE COLLEGE RADIO, stated that IBS has become stagnant. It would be presumptuous to deny their statement. IBS is stagnant largely because members do not take an active part in the organization. Most members set back and let others make association decisions. When a major issue emerges, very few reactions or comments are received by JCR. When JCR undertakes major research studies for the betterment of college radio, very few questionnaires are returned. When opinions are solicited, very few are given. When elections are held, very few ballots are returned.

An association is only as strong as its membership. A trite statement, but unfortunately it is true. Do you know who the nominees are? Do you know his present connections with college radio? Is he doing anything significant for college radio? Are there other persons you feel who could do a better job? You must make the association stronger.

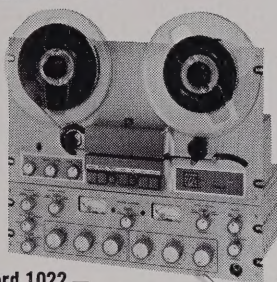
If each member, associate and full, will take a few minutes to send JCR a brief letter listing the goals you expect from IBS, JCR will publish them in a later issue and demand that the Board of Directors seriously consider each legitimate proposal.

The door has been opened for more participation by members. Help build a bigger, stronger, and more meaningful association.

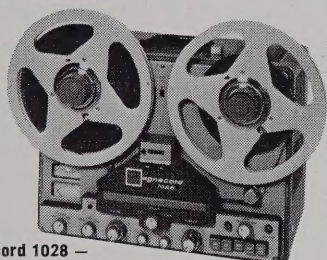
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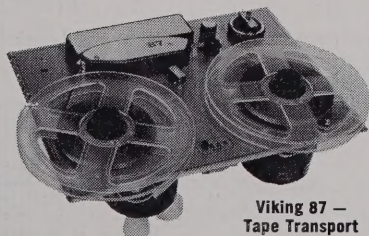
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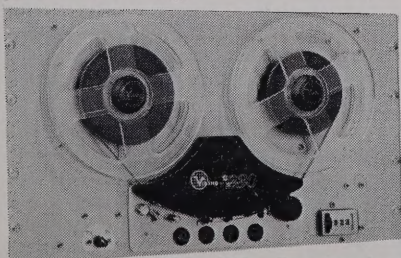
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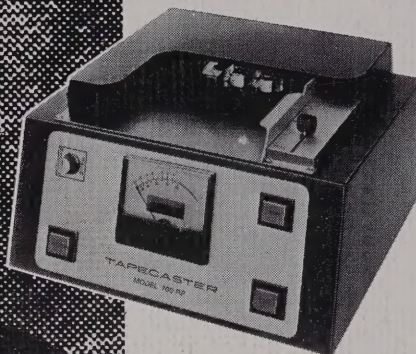
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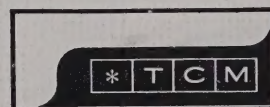
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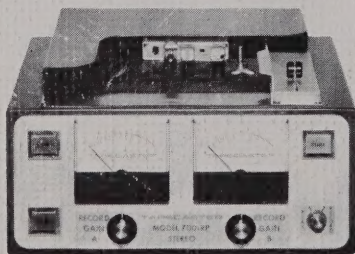
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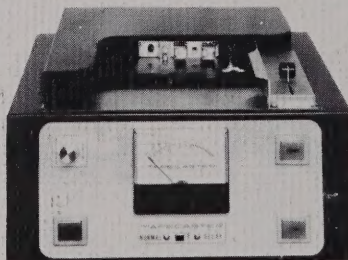
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